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BULLETIN
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TORREY BOTANICAL CLUB.

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A new Species of Grass.

By Geo. Vasey.

(Plate XLV.)

In 1830 Presl published in the first volume of Reliquiæ Haenkeniæ a description and figure of a Mexican grass which he called *Cathestechum prostratum*, which has not been since collected, and which is doubtfully admitted by Bentham and Hooker in the Genera Plantarum. In the herbarium of the Department of Agriculture are specimens of a grass collected by Dr. E. Palmer in Sonora, Mexico, in 1869, which has, until recently, remained undetermined. In 1882, however, I received from Dr. Havard specimens of the same grass collected at Presidio, Western Texas, and again in 1883 specimens collected in Presidio County. These specimens I finally concluded to be the long lost *Cathestechum* and sent specimens of them to Prof. E. Hackel of St. Poelten, Austria, who compared them with the original specimens of Presl in the Herbarium at Vienna, and decided that although they were of the same genus they were a different species, for which he proposed the name of *C. erectum*, Vasey and Hackel, and pointed out the differences between the two. Mr. Scribner ascertained that the same grass was collected on the Mexican Boundary Survey. As I am not yet prepared to separate the generic and specific characters, I give the full description as follows:

Cathestechum erectum, Vasey and Hackel.—Culms tufted, erect, 6 to 9 inches high, throwing out from the base long arched runners, of 2 or 3 joints, the joints villous and bearing a tuft of short leaves. The leaves are mostly at the base 2 to 3 inches long, narrow, plane or becoming somewhat involute, sparsely hairy on the margins, striate. Culm-leaves 2 or 3, distant, 1 to 2 inches long; ligule a ciliate ring.

Some of the culms are simple, and others develop at the upper sheath 2 to 4 lateral peduncles, each 2 to 4 inches long, forming a kind of cymose cluster. Each of these peduncles, as well as the main stem or rhachis, bears a raceme, about one inch long, of from 5 to 9 approximate, sessile fascicles of flowers. Each fascicle consists of three (rarely 4) spikelets. The lateral spikelets of each fascicle are 2-flowered, the middle spikelet usually 3-flowered, frequently with a fourth imperfect flower. Sometimes also the lateral spikelets have a sterile pedicel or an imperfect flower. The outer glumes are colored and very unequal; the lower one is minute (one-half line long), broadly cuneate, truncate or somewhat toothed at the apex; the upper one is lanceolate, compressed, somewhat keeled, 1-nerved, acute, or in the central spikelet 2-toothed and mucronate, 1 to 1.5 line long, villous externally. The flowering-glumes are oblong, about 1.5 line long, 4-lobed, with the nerves extended into awns between the lobes, the awns as long as, or in the central spikelet considerably longer than, the lobes. The lobes in the lateral spikelets hardly extend to the middle; in the central spikelet they extend half or two-thirds the length of the glume. The awns are either naked or ciliate, at least below. The palet is oblong-lanceolate, as long as its glume, 3-toothed or 3-lobed at the apex, and the two nerves in the central spikelet are extended into awns slightly longer than the teeth or lobes.

Presl's description says the flowers are all hermaphrodite; in our species my examinations lead me to think that only the lower flower of each spikelet is perfect. The genus is evidently related to *Ægopogon* and *Hilaria*, and by Bentham and Hooker is placed with them in the tribe Zoysieæ of the section Panicaceæ, to which they belong by virtue of the disarticulation of the flowers below the outer glumes. It has also affinity with the sub-tribe Pappophoreæ of the tribe Festucaceæ, where it was placed by Kunth, and where Mr. Hackel thinks it belongs.

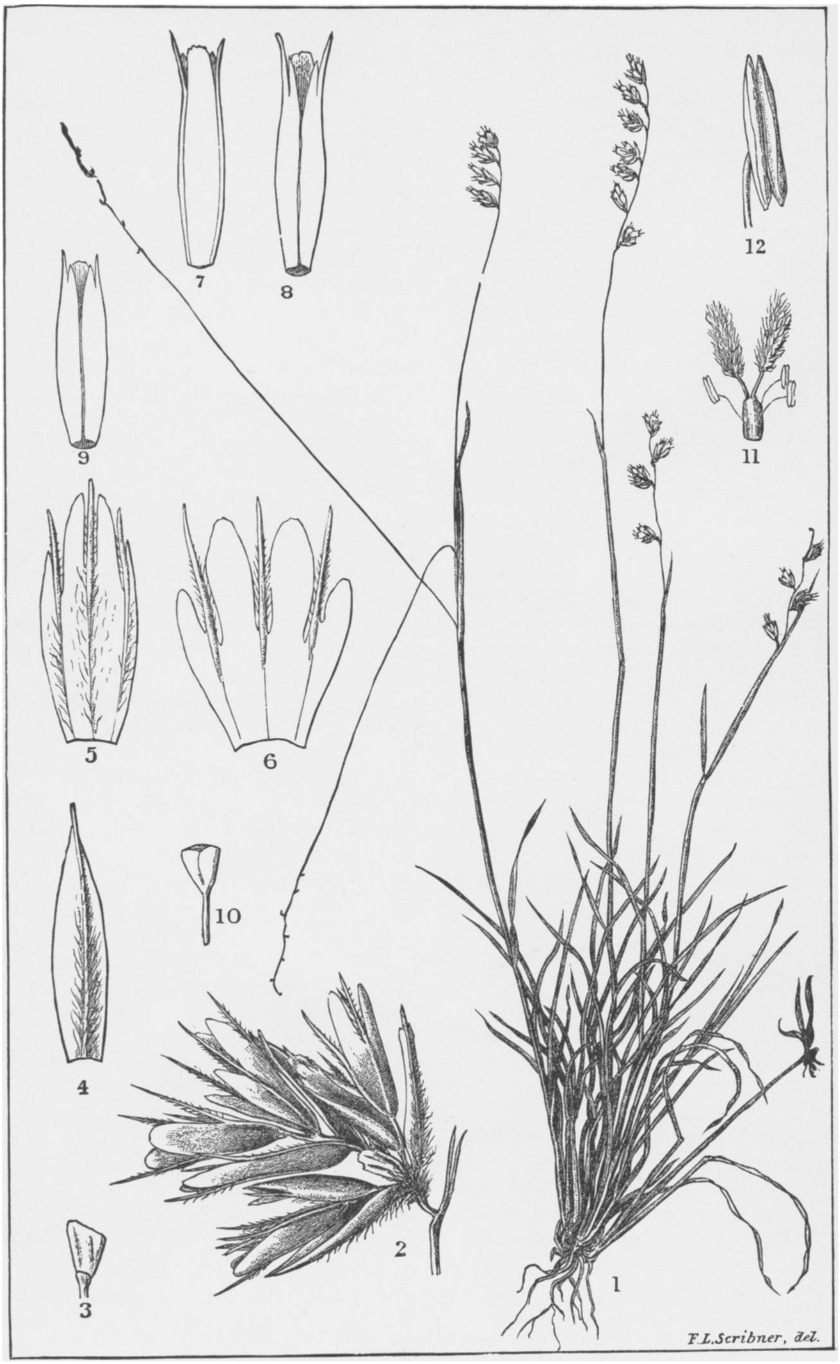
I am indebted for the drawings illustrating this article to Prof. W. J. Beal, for whom they were made by Mr. F. L. Scribner to illustrate a proposed work on grasses.

EXPLANATION OF PLATE XLV.—Fig. 1. *Cathestechum erectum*, V. and H., natural size. Fig. 2. One of the terminal clusters of three spikelets, showing the prolongation of the main axis, much enlarged. Fig. 3. Lower empty glume. Fig. 4. Upper empty glume. Fig. 5. Flowering-glume of first floret. Fig. 6. Flowering-glume of second floret. Figs. 7 and 8. Palea of the first floret, dorsal and anterior views. Fig. 9. Palea of the second floret. Fig. 10. Terminal rudimentary floret of the spikelet. Fig. 11. Pistil, with the imperfect stamens of the lower floret. Fig 12. A perfect stamen of one of the upper florets. (Figs 3 to 10 inclusive are enlarged on the same scale.)

George Engelmann.

George Engelmann was born in Frankfort-on-the-Main on the 2d of February, 1809, and died in St. Louis just after the completion of his seventy-fifth year, on the 4th of February, 1884, after an illness which had kept him from his scientific work but a few days.

Dr. Engelmann received his medical education and early scientific training at Berlin, Heidelberg and Frankfort. Agassiz, Alexander Braun, and Charles Schimper were among his college-associates and lifelong friends. He left Germany almost at once after his graduation, reaching New York in 1832. His first visit was to Philadelphia, where he was fortunate enough to make the acquaintance of Nuttall and other scientific men. His inclinations turning westward, he soon left the seaboard to seek a home in the almost unexplored regions beyond the Mississippi. He first went to St. Louis, but did not at once establish himself there. Desiring to see something of the western country before selecting a home, he undertook a long and solitary journey on horse-back through South-western Missouri, Arkansas and Western Louisiana. This journey, probably made in 1833, occupied six months. It nearly cost Dr. Engelmann his life, for he took a dangerous fever among the Arkansas swamps, into which his botanical zeal, no doubt, often led him. Fortunately he fell into the hands of a negro family, which nursed him faithfully through a long illness



CATHESTECHUM ERECTUM, V. & H.